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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/017,360	12/14/2001	Charles Trushell	US010673	8092
24737	7590	05/06/2004	EXAMINER	
PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3001 BRIARCLIFF MANOR, NY 10510			GUHARAY, KARABI	
			ART UNIT	PAPER NUMBER
			2879	

DATE MAILED: 05/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n No.

10/017,360

Applicant(s)

TRUSHELL, CHARLES

Examiner

Karabi Guharay

Art Unit

2879

-- The MAILING DATE of this c mmunication appears n the cover sheet with the c rresp ndence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on RCE, filed 30 March 2004.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
4a) Of the above claim(s) 17-20 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-16 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 30 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission, filed on 30 March 2004, has been entered.

Amendment of drawing overcomes the objection to the drawing.

Claim Objections

Claims 2-9 are objected to because of the following informalities:

Claim 2 recites "said layer" wherein claim 1 recites both two layers, one a layer of luminescent material, and a reflective layer. Thus it is not clear which "layer" applicant is referring to. Thus it is suggested that applicant should change it to "said reflective layer". Appropriate correction is required.

Claims 3-9 are also objected for being dependent on claim 2.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 12-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 12 recites the limitation "said first layer" in last line. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 12-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Kaduk et al. (US 3875455).

Regarding claim 12, Kadak discloses a low pressure mercury vapor fluorescent lamp (Fig 1) comprising a tubular light transmissive lamp envelope 2, having opposing sealed ends 8, a filling of mercury and a rare gas, a pair of discharge electrodes 3 arranged at a respective sealed end of the envelope, means for connecting electrodes to the source of electric potential outside of the lamp envelope (outer terminal at both ends 8, see Fig 1, lines 12- 68 of col 2), a single light transmissive and UV radiation reflecting layer (undercoat layer comprising a sintered mixture of an aluminum oxide material and a getter material MgO (lines 5-9 of col. 4), and a layer of luminous material (phosphor layer 12) disposed on the undercoat layer 11(see Fig 1).

Regarding claim 13, Kadak discloses that the reflective layer (undercoat layer 11) comprises sintered mixture of particulate aluminum oxide and a getter material of alkaline earth metal oxide (MgO), which is a getter material.

Further limitation of method of forming the mixture is not germane to the patentability of the lamp.

Regarding claim 14, Kudak discloses that the undercoat layer 11 is sintered prior to the envelope being sealed (see 47-63 of Col 3).

Regarding claim 15, Kudak discloses that the getter material includes MgO.

Claim 16 recites the process of forming the sintered mixture, which is not germane to the patentability of the lamp itself. Thus claims 5 and 9 have not been given patentable weight.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Trushell (US 5552665), in view of Kaduk et al. (US 3875455).

Regarding claim 1, Trushell discloses an electric lamp (Fig 1) consisting essentially a lamp envelope (3) having an inner surface (15), means within the lamp for generating UV radiation, a layer of a luminescent material (17) adjacent the inner surface of the lamp envelope for generating visible light when impinged by the UV radiation, a reflective layer (16) being disposed between the inner surface of the lamp envelope and the luminescent layer (Fig 1) for reflecting UV radiation which has passed through the layer of luminescent material back into the luminescent layer for increasing

the visible light output of the luminescent layer, the reflective layer consisting of particulate non-fluorescent oxidic material (gamma-alumina, lines 41-56 of column 2, and lines 45-61 of column 4), further process limitations are not given any patentable weight since method of forming the device is not germane to the issue of patentability of the device itself.

But Trushell fail to disclose a getter material mixed with the UV reflective oxidic material.

However, in the same field of electric lamp Kaduk et al. disclose an undercoat layer containing UV reflecting material of alumina particulate as in Trushell's device together with a getter material MgO, in order to increase the brightness of the lamp and also to reduce the non-uniform darkening as the lamp ages (lines 66 of column 1-line 3 of column 2).

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to mix a getter material in the undercoat layer, as disclosed by Kaduk et al., in the device of Trushell, such undercoat layer will increase the brightness of the lamp and also reduce the non-uniform darkening as the lamp ages.

Regarding claim 2, Kudak discloses that the reflective layer (undercoat layer 11) comprises sintered mixture of particulate aluminum oxide and a getter material of alkaline earth metal oxide (MgO), which is a getter material. Further limitation of method of forming the mixture is not germane to the patentability of the lamp. The same reason for combining art as in claim 1 applies.

Regarding claim 3, Kudak discloses that the undercoat layer 11 is sintered prior to the envelope being sealed (see 47-63 of Col 3). The same reason for combining art as in claim 1 applies.

Regarding claims 4, 6 & 8, Kudak discloses that the getter material includes MgO. The same reason for combining art as in claim 1 applies.

Claims 5, & 9 recite the process of forming the sintered mixture, which is not germane to the patentability of the lamp itself. Thus claims 5 and 9 have not been given patentable weight.

Regarding claim 7, Trushell discloses that the phosphor layer comprises halophosphate phosphor (line 20 of Col 5).

Regarding claim 10, Trushell discloses that the means for generating ultraviolet radiation comprises a filling of an ionizable material, a rare gas and a pair of discharge electrode 6 (lines 45-56 of column 4).

Regarding claim 11, Trushell discloses that the pair of discharge electrodes 6 each adjacent a respective sealed end (Fig 1).

Claims 17-20 are withdrawn from consideration.

Other Prior Art Cited

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure : Lisitsyn et al. (US 6683407); Woodward et al. (US 5898265); EP 192290 A1.

Response to Arguments

Applicant's arguments filed on 30 March 2004 have been fully considered but they are not persuasive for following reasons:

(1) Amended claim 12 recites a single light transmissive and UV radiation reflective layer.

However, Kaduk et al. also discloses a single light transmissive and UV reflective layer, in this case undercoat layer 11, which is light transmissive and UV reflecting layer. The other layer is different since that layer is only visible light reflective not UV reflective.

(2) Applicant contends that examiner should present references to substantiate that Kaduk's undercoat layer containing alumina is a reflective layer.

For this matter, examiner respectfully presents that applicant in his own patent '665 teaches that non-luminous alumina containing layers between inner surface of the lamp and the phosphor layer have been used in the industry for UV radiation reflecting layer for reflecting UV radiation back into phosphor layer (see column 3 of patent 5,552,665).

Further Lisitsyn et al. (US 6683407) teach that that alumina particulate layer provides UV reflecting barrier layer in the lamp.

Woodward et al. (US 5898265) teaches that alumina particulate layer is light transmissive and UV radiation reflective.

EP (0192290) teaches that MgO acts as a getter material.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karabi Guharay whose telephone number is (571) 272-2452. The examiner can normally be reached on Monday-Friday 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar D. Patel can be reached on (571) 272-2457. The fax phone number for the organization is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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